DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	BOG POND	Lake Area (ha):	17.52
Town:	LINCOLN	Maximum depth (m):	1.4
County:	Grafton	Mean depth (m):	0.5
River Basin:	Merrimack	Volume (m^3):	82000
Latitude:	44°05'21" N	Relative depth:	0.3
Longitude:	71°44'23" W	Shore configuration:	1.95
Elevation (ft):	2340	Areal water load (m/yr):	36.81
Shore length (m):	2900	Flushing rate (yr^{-1}):	78.90
Watershed area (ha):	907.3	P retention coeff.:	0.40
% watershed ponded:	0.0	Lake type:	natural

BIOLOGICAL:		7 February 1997	12 August 1996
DOM. PHYTOPLANKTON (% TOTAL)	#1		MOUGEOTIA 85%
	#2		DINOBRYON 12%
	#3		
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			2.16
DOM. ZOOPLANKTON (% TOTAL)	#1		SPARSE - NO DOMINANT
	#2		
	#3		
ROTIFERS/LITER			<1
MICROCRUSTACEA/LITER			8
ZOOPLANKTON ABUNDANCE (#/L)			8
VASCULAR PLANT ABUNDANCE			Common
SECCHI DISK TRANSPARENCY (m)			1.0
BOTTOM DISSOLVED OXYGEN (mg/L)			7.2
BACTERIA (E. coli, #/100 ml)	#1		1
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

weakly stratified

Depth of thermocline (m): None
Hypolimnion volume (m^3) : None
Anoxic volume (m^3) : None

CHEMICAL:

Lake: BOG POND
Town: LINCOLN

	7 February 1997		12 August 1996		
DEPTH (m)			1.0		
pH (units)			5.2		
A.N.C. (Alkalinity)			0.4		
NITRATE NITROGEN			< 0.05		
TOTAL KJELDAHL NITROGEN			0.66		
TOTAL PHOSPHORUS			0.016		
CONDUCTIVITY (μmhos/cm)			16.8		
APPARENT COLOR (cpu)			110		
MAGNESIUM			0.24		
CALCIUM			1.0		
SODIUM			< 1.0		
POTASSIUM			< 0.40		
CHLORIDE			< 2		
SULFATE			3		
TN : TP			41		
CALCITE SATURATION INDEX			6.5		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1996

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	5	3	0	8	Meso.

COMMENTS:

1. This is a high elevation, remote pond, located within the White Mountain National Forest on a plateau between Mt. Wolf and the South Peak ridge of Kinsman Mt. It consists of two lakes connected by a shallow channel which is crossed by a power line. It was surveyed jointly with Fish and Game.

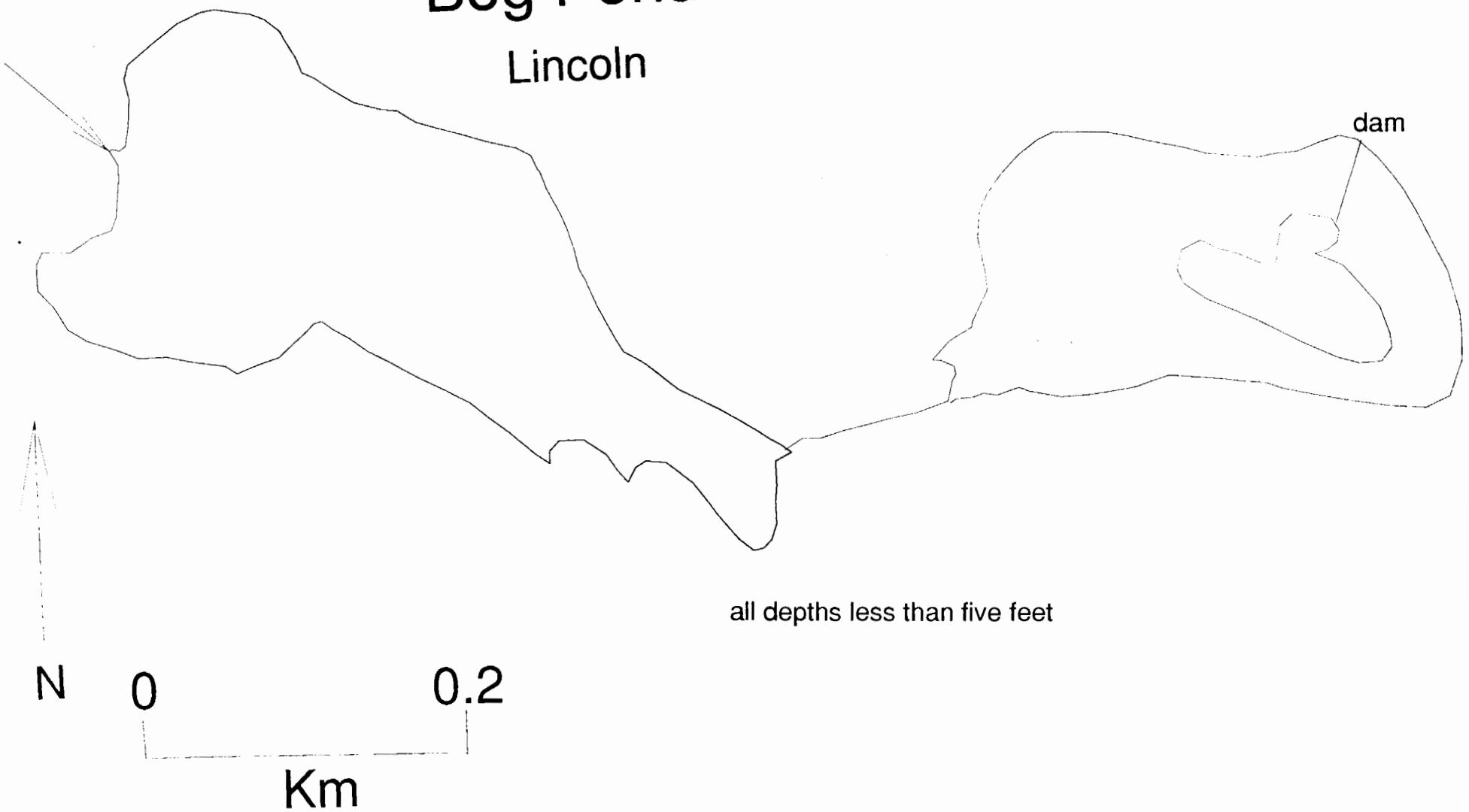
2. No motors are allowed on the pond.

3. No sample was collected in the winter; the pond was frozen to the bottom.

4. Bog Pond is a dark tea-colored acid pond. The summer phytoplankton was dominated by a filamentous green algae (*Mougeotia*), which is typical for acid-stressed ponds.

Bog Pond

Lincoln



all depths less than five feet

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FIELD DATA SHEET

LAKE: BOG POND TOWN: LINCOLN
DATE: 08/12/96 WEATHER: CLOUDY

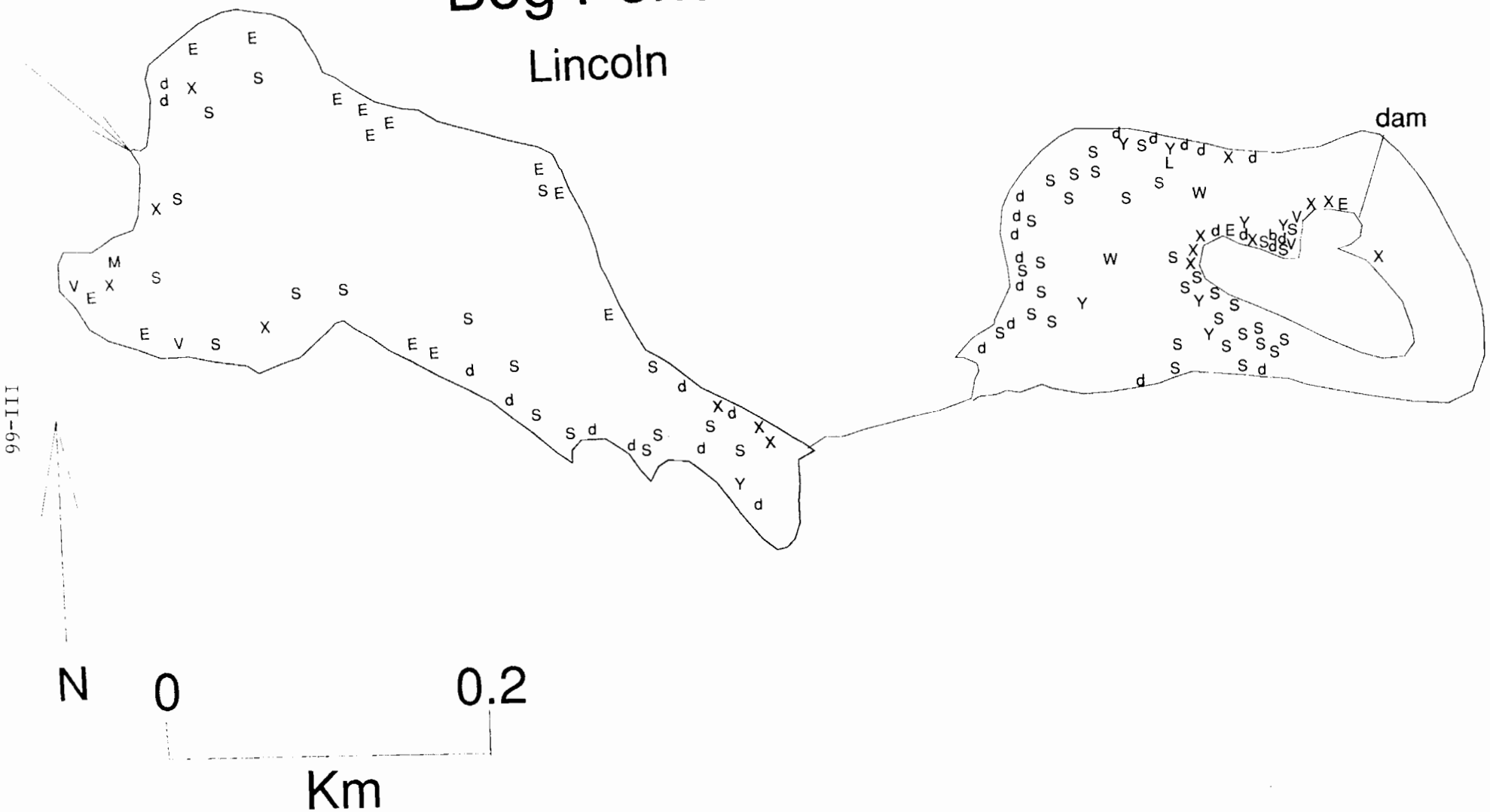
	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	23.0	7.9	91 %
	0.5	21.2	7.9	87 %
	1.0	17.0	7.2	74 %

SECCHI DISK (m): 1.0 COMMENTS:
BOTTOM DEPTH (m): 1.4
TIME: 1530

*Dissolved oxygen values are in mg/L

Bog Pond

Lincoln



AQUATIC PLANT SURVEY

LAKE: BOG POND TOWN: LINCOLN DATE: 08/12/96

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
S	Sparganium	Bur reed	Common/Abun
V	Vallisneria americana	Tape grass	Sparse
d	Dulichium arundinaceum	Three-way sedge	Common
X		Sterile thread-like leaf	Common
E	Eriocaulon septangulare	Pipewort	Common
U	Utricularia	Bladderwort	Common
Y	Nuphar	Yellow water lily	Sparse
M	Myriophyllum humile	Water milfoil	Common
W	Potamogeton	Pondweed	Sparse
b	Scirpus	Bulrush	Sparse
L	Lemnaceae	Duckweed family	Sparse

OVERALL ABUNDANCE: Common

GENERAL OBSERVATIONS:

1. This is a shallow, weedy pond surrounded by wetlands.
2. Sweet gale and leatherleaf were abundant around the entire shoreline.